



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,677	02/20/2004	Kenichi Kitamura	500.43519X00	5539
24956 7590 04/16/2008 MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314				
EXAMINER				
MYINT, DENNIS Y				
ART UNIT		PAPER NUMBER		
2162				
MAIL DATE		DELIVERY MODE		
04/16/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/781,677

Applicant(s)

KITAMURA ET AL.

Examiner

DENNIS MYINT

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 1, 2008 has been entered.

2. The amendment filed on February 1, 2008 has been received and entered. Claims 1, 2, and 22-25 are currently pending in this application. Claims 1, 2, and 22 are independent claims. Claims 1, 2, 22-25 were all amended.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 23, the claim in line 7 recites "in parallel with the storing". However, the claim depends from claim 1 and it is not ascertainable whether "the storing" refers to "storing a history of a processing of the program" in claim 1 lines 10-11 or "copying data from a first database to a second database" as

recited in claim 1 line 2. As such, claim 23 is rejected under 12 U.S.C. 112 second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 23, the claim in lines 10-13 recites "wherein the replica operation mode is a mode in which the program access allowance has been switched from the first database to the second database so that the program is again allowed access to the first database in place of the access to the second database". The first part of said limitations recites" the program access allowance has been switched **from the first database to the second database**". However, the second part of the limitation states "so that **the program is again allowed access to the first database in place of the access to the second database**". Those two parts of the limitation are self-contradictory because program access was switched from the first database to the second database and the program is allowed access to the second in place of the first database. As such, said limitation renders the claim unclear, vague, and indefinite and the claim is rejected under 12 U.S.C. 112 second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 24, the claim in line 7 recites "in parallel with the storing". However, the claim depends from claim 2 and it is not ascertainable whether "the storing" refers to "storing a history of a processing of the program" in claim 2 lines 10 or "copying data from a first database to a second database" as recited in claim 2 lines 2-3. As such, claim 24 is rejected under 12 U.S.C. 112

second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 24, the claim in lines 11-14 recites "wherein the replica operation mode is a mode in which the program access allowance has been switched from the first database to the second database so that the program is again allowed access to the first database in place of the access to the second database". The first part of said limitations recites "the program access allowance has been switched **from the first database to the second database**". However, the second part of the limitation states "so that **the program is again allowed access to the first database in place of the access to the second database**". Those two parts of the limitation are self-contradictory because program access was switched from the first database to the second database and the program is allowed access to the second in place of the first database. As such, said limitation renders the claim unclear, vague, and indefinite and the claim is rejected under 12 U.S.C. 112 second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 25, the claim in line 8 recites "in parallel with the storing". However, the claim depends from claim 22 and it is not ascertainable whether "the storing" refers to "storing a history of a processing of the program" in claim 22 lines 11-12 or "copying data from a first database to a second database" as recited in claim 22 line 2. As such, claim 25 is rejected under 12 U.S.C. 112

Art Unit: 2162

second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 25, the claim in lines 11-14 recites "wherein the replica operation mode is a mode in which the program access allowance has been switched from the first database to the second database so that the program is again allowed access to the first database in place of the access to the second database". The first part of said limitations recites "the program access allowance has been switched **from the first database to the second database**". However, the second part of the limitation states "so that **the program is again allowed access to the first database in place of the access to the second database**". Those two parts of the limitation are self-contradictory because program access was switched from the first database to the second database and the program is allowed access to the second in place of the first database. As such, said limitation renders the claim unclear, vague, and indefinite and the claim is rejected under 35 U.S.C. 102 second paragraph for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2162

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 1, 2 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maurer III et al., (hereinafter "Maurer") (U.S. Patent Application Publication No. 2003/0065780) in view of Marshall et al., (hereinafter "Marshall") (U.S. Patent Application Publication Number 2003/0135478).

As per claim 1, Maurer is directed to a data processing method and teaches the limitations:

"copying data from a first database to a second database while allowing access to the first database by a program during the copying, such that the second database is a duplicate of the first database as a result of the copying" (Maurer, Figure 2; Maurer Figure 3, i.e., Figure 3: *BCV* and *STD* (e.g. DB Files); Maurer Paragraph 0044, i.e., *The invention is useful in an environment wherein replicating to a local volume denoted as a business continuance volume (BCV) is employed (FIG. 2). Such a local system which employs mirroring for allowing*

Art Unit: 2162

access to production volumes **while** performing backup is also described in the '497 patent incorporated herein; Here, production volumes map to "a first database" of the claimed invention and a business continuance volume (BCV) or backup maps to "a second database" of the claimed invention; Maurer Paragraph 0054, i.e., *When using the preferred Symmetrix such a mirror is denoted as a business continuance volume (BCV), also referred to in general terms as a mirrored disk. and in such a context specifically as a BCV device. **If data on the standard volume changes**, the same changes are immediately applied to the mirrored disk);*

"(as a result of an input designating reorganization of the first database), switching a program access allowance from the first database to the second database so that the program is allowed access to the second database in place of the access to the first database" (Maurer, Figure 3: *BCV and STD* (e.g. DB Files); Paragraph 0060, i.e., *such as database transaction processing*; Paragraph 0112, i.e., *a data storage system includes a storage array having logical volumes or units that can be accessed by one or more clients via a switch and In the case where the first logical unit is no longer accessible, such as due to disk failure, the storage array can provide access to the copy of the first logical unit by the client by swapping the logical unit accessed by the host*; As pointed in the prior office action, when program access (control) is switched from the first database, any operation could be performed on the first database, while program access (control) is at the second database, such as reorganization of the first database or, as Maurer teaches, the storage of the first database might have

Art Unit: 2162

been down); (Limitation in the parenthesis, that is, "as a result of an input designating reorganization of the first database" is not explicitly taught by Maurer but included for the sake of easy reading);

"after switching the program access allowance, storing a history of a processing of the program to the second database as a processing history " (Maurer, Paragraph 0106, i.e., ... *then the information related to the data may also be backed up..... and archives/redo logs*; Also note paragraphs 108-019 for said logs), and (executing the reorganization of the first database in parallel with the accessing of the program to the second database, the processing history being stored during the execution of the reorganization), and "the processing history being stored on a storage system in which the first database and the second database are stored" (Maurer Paragraph 0109, i.e., *In the database there are archive files known as redo log files or simply as the redo log. This is where information that will be used in a restore operation is kept. Without the redo log files a system failure would render the data unrecoverable. When a log switch occurs, the log records in the filled redo log file are copied to an archive log file if archiving is enabled*); Note that the log files (i.e., history of a processing of the program to the second database" are achieved in the same storage system in which the first database and the second database are stored); (Limitation in the parenthesis, that is, "executing the reorganization of the first database in parallel with the accessing of the program to the second database, the processing history being stored during the execution of the reorganization " is not explicitly taught by Maurer but included for the sake of easy reading);

Art Unit: 2162

"(upon completion of the reorganization of the first database), updating the first database based on the processing history (stored during the reorganization) (Maurer, Paragraph 0107-0109, i.e., *redo log files*, and *Control files contain information in the Oracle database, including information that describes the instance where the data files and log files reside and This is where information that will be used in a restore operation is kept*; Maurer Paragraph 0109, i.e., *In the database there are archive files known as redo log files or simply as the redo log. This is where information that will be used in a restore operation is kept. Without the redo log files a system failure would render the data unrecoverable. When a log switch occurs, the log records in the filled redo log file are copied to an archive log file if archiving is enabled*) ; and "upon completion of the updating of the first database based on the processing history stored" (Maurer, Paragraph 0112, i.e., *In one embodiment, the client and/or client application is not aware that the first logical unit, e.g., original or source, logical unit is no longer being accessed. If desired, a restore can be performed from the copy to the first logical unit and application access to the first logical unit can be provided **after** mirror synchronization for the restore is complete*), "switching the program access allowance from the second database to the first database so that the program is again allowed access to the first database in place of the access to the second database" (Maurer, Paragraph 0112, i.e. *swapping the logical unit* and Paragraph 0055, i.e. *Mirrors can be synchronized in either direction* (i.e., from the BCV to the standard or visa versa) (Limitation in the parenthesis, that is, "upon completion of the reorganization of the first database" and "stored during the

Art Unit: 2162

reorganization * are not explicitly taught by Maurer but included for the sake of easy reading).

The system and method of Maurer is not just a general synchronization system and method. Rather, Maurer teaches swapping logical units of a storage system wherein a first volume (first database) can be mirrored to a second volume (second database) and program/application access is switched to said second volume (second database) so that said second volume (second database) acts in place of the first volume (first database), accepting updates (Maurer, Paragraph 0060, i.e., *such as database transaction processing*; Paragraph 0112, i.e., *a data storage system includes a storage array having logical volumes or units that can be accessed by one or more clients via a switch and In the case where the first logical unit is no longer accessible, such as due to disk failure, the storage array can provide access to the copy of the first logical unit by the client by swapping the logical unit accessed by the host*). As necessary, the method and system of Maurer could switch program/application back to the first volume after updating the first volume (i.e., based on the history of processing) if finished (Maurer, Paragraph 0112, i.e. *swapping the logical unit* ; Maurer Paragraph 0112, i.e., *.. In one embodiment, the client and/or client application is not aware that the first logical unit, e.g., original or source, logical unit is no longer being accessed. If desired, a restore can be performed from the copy to the first logical unit and application access to the first logical unit can be provided after mirror synchronization for the restore is complete* and Paragraph 0055, i.e. *Mirrors can be synchronized in either direction (i.e., from the BCV to the standard or visa versa))*). The relevant feature of the Maurer patent to the

Art Unit: 2162

instant application is the feature of replicating a first database to a second database while program access is being allowed to the first database, switching program access between databases after completion of data operations on either database, such as updating one database based on history of processing (i.e., based on logs).

Maurer does not explicitly teach the limitations: "executing the reorganization of the first database in parallel with the accessing of the program to the second database, the processing history being stored during the execution of the reorganization", "upon completion of the reorganization of the first database", and "stored during the reorganization". However, note that Maurer does teach **concurrent/parallel processing** of allowing program access to the first database while said first database is being replicated to the second database (Maurer Paragraph 0044, i.e., *The invention is useful in an environment wherein replicating to a local volume denoted as a business continuance volume (BCV) is employed (FIG. 2). Such a local system which employs mirroring for allowing access to production volumes while performing backup is also described in the '497 patent incorporated herein*; Here, production volumes map to "a first database" of the claimed invention and a business continuance volume (BCV) or backup maps to "a second database" of the claimed invention).

On the other hand, Marshall teaches the limitations: "executing reorganization of the first database in parallel with accessing of the program to the second database", "the processing history being stored during the execution of the reorganization", " and "upon completion of the reorganization of the first database" (Marshall, Paragraph 0038, i.e., *According to the present disclosure,*

*all updates to the database that occur **during reorganization** of database can be captured and stored into data spaces for later replay to the new database and Paragraph 0011, i.e., online reorganization of an existing database that occurs **while** read and update activity of the existing database continues may include unloading the existing database, reloading the existing database to a shadow database, building shadow database indexes, capturing updates for the existing database, taking the existing database offline, finalizing the shadow database with the any remaining updates when the existing database is taken offline, and placing the finalized shadow database online) .*

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Maurer for switching program access back and forth between database volumes with the method of Marshall for storing updates (history of processing) while databases are being reorganized, allowing concurrent/parallel access to a second database while the first database is being reorganized, and updating the reorganized database after the process of reorganization is finished so that the combined method would allow parallel/concurrent program access to a second database while the first database is being recognized, save updates (history of processing) which occur during the reorganizing of the first data base for updating the first database when the reorganization process is finished, and execute reorganization of the first database in parallel with the storing. One would have been motivated to do so in order to *reduce this outage or downtime* (Marshall, Paragraph 0011).

Claim 2 is essentially the same as claim 1 except that it set forth the claimed invention as a data processing device rather than a data processing method and rejected for the same reasons as applied hereinabove.

Claim 22 is essentially the same as claim 1 except that it set forth the claimed invention as a computer-readable recording medium storing a data processing program comprising codes rather than a data processing method and rejected for the same reasons as applied hereinabove.

8. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maurer in view of Marshall, and further in view of Janssen (U.S. Patent Application Publication Number 2003/0163510).

As per claim 23, Maurer in view of Marshall as applied to claim 1 teaches the limitations: "executing said access to the first database in the replica mode in parallel with the storing" (Maurer in view of Marshall as applied to claim 1 above), and "wherein the replica operation mode is a mode in which program access allowance has been switched from the first database to the second database so that the program is again allowed access to the first database in place of the access to the second database" (Maurer, Paragraph 0112, i.e. *swapping the logical unit* and Paragraph 0055, i.e. *Mirrors can be synchronized in either direction* (i.e., from the BCV to the standard or visa versa)).

However, Maurer in view of Marshall as applied to claim 1 does not explicitly teach the limitations: "determining whether the access to the first

Art Unit: 2162

database in a replica operation mode is allowed for the program seeking the access", "if it is determined that input/output access to the first database in a replica operation is not allowed for said program, causing an error and disabling access to the first database", "wherein said step of determining whether the access to the first database in a replica operation mode is allowed includes a step of reading an access allowance flag from a table using the name of the program seeking the access as a key", and "wherein the access allowance flag indicates whether the access to the first database is allowed for the program seeking the access".

On the other hand, Janssen teaches the limitations:

"determining whether the input/output access to the first database in a replica operation mode is allowed for the program seeking the access" (Janssen, Paragraph 0008, i.e., *a database of tasks and a user-specific list of allowed tasks, comprising allowed application programs, configuring the list of allowed tasks on the basis of the user database and the database of tasks, detecting a command to execute a task, and preventing execution of tasks that not on the list of allowed tasks*), "if it is determined that access to the first database in a replica operation is not allowed for said program, causing an error and disabling access to the first database" (Janssen, Figure 3, i.e., *Compare to List, always terminate, terminate task*), "wherein said step of determining whether the access to the first database in a replica operation mode is allowed includes a step of reading an access allowance flag from a table using the name of the program seeking the access as a key" (Janssen, Paragraph 0008, i.e., *a database of tasks and a user-*

specific list of allowed tasks, comprising allowed application programs) and “wherein the access allowance flag indicates whether the access to the first database is allowed for the program seeking the access” (Janssen, Paragraph 0008, i.e., *a database of tasks and a user-specific list of allowed tasks, comprising allowed application programs, configuring the list of allowed tasks on the basis of the user database and the database of tasks, detecting a command to execute a task, and preventing execution of tasks that not on the list of allowed tasks*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art modify the method of Maurer in view of Marshall and further in view of Yanai to add the feature of using a list of allowed programs to access databases, as taught by Janssen, to the method of Maurer in view of Marshall and further in view of Yanai as applied to claim 1 so that the resultant method would comprising determining input/output access to the first database by programming seeking input/output access to said first database. One would have been motivated to do so simply to establish security of databases by checking access control list (which is well known in the art).

Claim 24 is essentially the same as claim 23 except that it set forth the claimed invention as a data processing device rather than a data processing method and rejected for the same reasons as applied hereinabove.

Claim 25 is essentially the same as claim 23 except that it set forth the claimed invention as a computer-readable recording medium storing a data processing program comprising codes rather than a data processing method and rejected for the same reasons as applied hereinabove.

Response to Arguments

9. The applicant's arguments filed on February 1, 2008, have been fully considered but are not persuasive.

Applicant argued that *"thus, according to Maurer, the second logical unit is a mirror of the first logical unit, and the first and second logical units the same contents in different systems"* (Applicant's argument, page 10 second paragraph). Applicant also argued that *"one distinction between the claimed invention and Maurer, then, is hat the present invention does not shut down the first database in order to perform the copying of its contents to the second database"* (Applicant's argument, page 10 third paragraph).

Examiner respectfully disagrees all of the allegations as argued. Examiner, in his previous office action, gave detail explanation of claimed limitation and pointed out exact locations in the cited prior art. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-1] Interpretation of Claims-Broadest Reasonable Interpretation.

During patent examination, the pending claims must be 'given the

Art Unit: 2162

broadest reasonable interpretation consistent with the specification.’ Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

With respect to Applicant’s argument that *“thus, according to Maurer, the second logical unit is a mirror of the first logical unit, and the first and second logical units the same contents in different systems”* (Applicant’s argument, page 10 second paragraph), it is pointed that a first database from which data replication is performed to a second database is and said second database are in the database system as depicted in Figure 3 of Maurer wherein business continuation volumes (BCVs) 214 and STD (eg., DB FILES) are included in the larger database system of the figure.

As to Applicant’s argument that *“one distinction between the claimed invention and Maurer, then, is that the present invention does not shut down the first database in order to perform the copying of its contents to the second database”* (Applicant’s argument, page 10 third paragraph), it is pointed out that the method and system of system does NOT shut down the first database in order to perform the copying of its contents to the second database. Rather, the method and system of Maurer performs copying of contents of the first database to the second database while program access to the first database is being allowed (Maurer Paragraph 0044, i.e., *The invention is useful in an environment wherein replicating to a local volume denoted as a business continuance volume*

*(BCV) is employed (FIG. 2). Such a local system which employs mirroring for allowing access to production volumes **while** performing backup is also described in the '497 patent incorporated herein; Here, production volumes map to "a first database" of the claimed invention and a business continuance volume (BCV) or backup maps to "a second database" of the claimed invention).*

Applicant also argued that "combining the teaching of Marshall with those Maurer is perhaps unpredictable. Maurer, as noted, is directed to a backup-and-restore scheme using mirrored volumes, while Marshall is redirected to reorganizing rather than restoring. However, it is not seen how any combination Maurer and Marshall would overcome the distinctions noted above" (Applicant's argument, page 12 third paragraph).

In response, it is pointed out that the system and method of Maurer teaches **concurrent/parallel processing** of allowing program access to the first database while said first database is being replicated to the second database. The relevant feature of the Maurer patent to the instant application is the feature of replicating a first database to a second database while program access is being allowed to the first database, switching program access between databases after completion of data operations on either database, such as updating one database based on history of processing (i.e., based on logs). Marshall teaches storing updates (history of processing) while databases are being reorganized, allowing concurrent/parallel access to a second database while the first database is being reorganized, and updating the reorganized database after the process of reorganization is finished. Therefore the combined

Art Unit: 2162

method of Maurer in view of Marshall would allow parallel/concurrent program access to a second database while the first database is being recognized, save updates (history of processing) which occur during the reorganizing of the first data base for updating the first database when the reorganization process is finished, and execute reorganization of the first database in parallel with the storing. One would have been motivated to do so in order to *reduce this outage or downtime* (Marshall, Paragraph 0011).

In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Action. For the above reasons, Examiner believed that rejection of the last Office action was proper.

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Myint whose telephone number is (571) 272-5629. The examiner can normally be reached on 8:30 AM - 5:30 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-5629.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dennis Myint
Examiner
AU-2162

/Cam Y Truong/
Primary Examiner, Art Unit 2162